

NATURAL RESOURCES CONSERVATION SERVICE

CONSERVATION PRACTICE STANDARD

PEST MANAGEMENT

(Acre)

CODE 595

DEFINITION

Utilizing environmentally sensitive prevention, avoidance, monitoring and suppression strategies, to manage weeds, insects, diseases, animals and other organisms (including invasive and non-invasive species), that directly or indirectly cause damage or annoyance.

(H7506C) is required for chemical pest control.

PURPOSES

This practice is applied as part of a Resource Management System (RMS) to support one or more of the following purposes:

- Enhance quantity and quality of commodities.
- Minimize negative impacts of pest control on soil resources, water resources, air resources, plant resources, animal resources and/or humans.

Persons who approve plans for pest management shall be certified in Kansas according to General Manual, Title 190, Part 404.11.

Plans for pest management that are elements of a more comprehensive conservation plan shall recognize other requirements of the conservation plan and be compatible with its other requirements.

CONDITIONS WHERE PRACTICE APPLIES

Wherever pests will be managed.

Integrated Pest Management (IPM) that strives to balance economics, efficacy, and environmental risk, where available, shall be incorporated into planning alternatives. IPM is a sustainable approach to pest control that combines the use of prevention, avoidance, monitoring, and suppression strategies, to maintain pest populations below economically damaging levels, to minimize pest resistance, and to minimize harmful effects of pest control on human health and environmental resources. IPM suppression systems include biological controls, cultural controls, and the judicious use of chemical controls. (For further guidance see Kansas State University Agricultural Experiment Station and Cooperative Extension Service publications for commodity-specific IPM.)

CRITERIA

General Criteria Applicable to All Purposes

A pest management component of a conservation plan shall be developed.

All methods of pest management must comply with federal, state, and local regulations, including management plans for invasive pest species, noxious weeds, and disease vectors. Compliance with the Food Quality Protection Act (FQPA); Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA); Worker Protection Standard (WPS); and Interim Endangered Species Protection Program

An appropriate set of mitigation techniques must be planned and implemented to reduce the environmental risks of pest management activities in accordance with quality criteria in the local Field Office Technical Guide. Mitigation techniques include, but are not limited to, practices like a Filter Strip or Conservation Crop Rotation, Grass Waterways, and management techniques like application method or timing.

All methods of pest management must be integrated with other components of the conservation plan.

Clients shall be instructed to pay special attention to all environmental hazards and site-specific application criteria listed on pesticide labels and contained in Kansas State University Agricultural Experiment Station and Cooperative Extension Service and Certified Crop Advisors recommendations.

Additional Criteria to Protect Quantity and Quality of Commodities

As an essential component of both commodity-specific IPM and IPM general principles, clients shall be encouraged to use the minimum level of pest control necessary to meet their objectives for commodity quantity and quality.

Additional Criteria to Protect Soil Resources

In conjunction with other conservation practices, the number, sequence, and timing of tillage operations shall be managed to maintain soil quality and maintain soil loss at or below the soil loss tolerance "T." The Revised Universal Soil Loss Equation (RUSLE) and the Wind Erosion Equation (WEQ) will be used.

Clients shall be encouraged to pay special attention to pesticide label instructions for limiting pesticide residues in soil that may negatively impact non-target plants, animals, and humans.

Additional Criteria to Protect Water Resources

Pest management environmental risks, including the impacts of pesticides in ground and surface water on humans and non-target plants and animals, must be evaluated for all identified water resource concerns. The Potential Pesticide Loss by Soil which is derived from the Windows Pesticide Screening Tools Computer Program WIN-PST shall be used in pest management plans to evaluate environmental risks.

When a chosen alternative has significant potential to negatively impact important water resources, (e.g., WIN-PST "Extra High", "High" or "Intermediate" soil/pesticide human risk

ratings in the drainage area of a drinking water reservoir), an appropriate set of mitigation techniques must be put in place to address risks to humans and non-target plants and animals. Mitigation and management techniques may include conservation practices such as Filter Strip, Irrigation Water Management, and Field Borders, or pesticide incorporation may be appropriate mitigation techniques for pesticide solution loss that is impacting a surface water body. Clients shall be encouraged to pay special attention to pesticide label instructions for limiting pesticide residues in leachate and runoff that may negatively impact non-target plants, animals, and humans.

The number, sequence, and timing of tillage operations shall be managed in conjunction with other sediment control tactics and practices, in order to minimize sediment losses to nearby surface water bodies.

Additional Criteria to Protect Air Resources

When an air resource concern is identified, clients will pay special attention to pesticide label instructions for minimizing volatilization and drift that may negatively impact non-target plants, animals, and humans.

Additional Criteria to Protect Plant Resources

When a plant resource concern is identified, clients will pay special attention to pesticide label instructions including those directed at:

- Preventing misdirected pest management control measures that negatively impact plants (e.g., removing pesticide residues from sprayers before moving to the next crop and properly adjusting cultivator teeth and flame burners).
- Appropriate climatic conditions, crop stage, soil moisture, pH, and organic matter in order to protect plant health.
- Limiting pesticide residues in soil that can carry over and harm subsequent crops.

Additional Criteria to Protect Animal Resources

When an animal resource concern is identified, clients will pay special attention to pesticide

label instructions that minimize negative impacts to animals.

Additional Criteria to Protect Humans

When a human resource concern is identified, clients will pay special attention to pesticide label instructions that minimize negative impacts to humans.

CONSIDERATIONS

If commodity-specific IPM is not available, the following IPM principles should be considered:

- Prevention, such as using pest-free seeds and transplants, cleaning tillage and harvesting equipment between fields, irrigation scheduling to avoid situations conducive to disease development, etc.
- Avoidance, such as using pest resistant varieties, crop rotation, trap crops, etc.
- Monitoring, such as pest scouting, soil testing, weather forecasting, etc., to help target suppression strategies and avoid routine preventative pest control.
- Suppression, such as cultural, biological, and chemical controls, that can reduce a pest population or its impacts. Chemical controls should be used judiciously in order to minimize environmental risk and pest resistance.

Adequate plant nutrients and soil moisture, including favorable pH and soil conditions, should be available to reduce plant stress, improve plant vigor, and increase the plant's overall ability to tolerate pests.

On irrigated land, irrigation water management should be designed to minimize pest management environmental risk.

PLANS AND SPECIFICATIONS

The pest management component of a conservation plan shall be prepared in accordance with the criteria of this standard and shall describe the requirements for applying the practice to achieve its intended purpose(s).

As a minimum, the pest management component of a conservation plan shall include:

1. Aerial photo, map, or sketch
2. Soil map
3. Crop information
4. Identify target pests
5. Pest control and management and method
 - a. Method of control selected
 - b. Management method or pesticide name
 - c. Rates, product, and form
 - Timing of application
 - Method of application
 - d. Mitigation and management techniques
6. Evaluate environmental impact of the pesticide management
 - a. Use Windows-Pesticide Screening Tool Soil-pesticide Interaction
 - b. Use Potential Pesticide Loss by Soil
 - c. Locate sensitive resources and setbacks
7. Operation, Safety, and Maintenance Plan

OPERATION AND MAINTENANCE

The pest management component of a conservation plan shall include appropriate operation and maintenance items for the client. These may include:

- Review and update the plan periodically in order to incorporate new IPM technology, respond to cropping system and pest complex changes, and avoid the development of pest resistance.
- Maintain mitigation techniques identified in the plan in order to ensure continued effectiveness.
- Develop a safety plan for individuals exposed to chemicals, including telephone numbers and addresses of emergency treatment centers for individuals exposed to chemicals and the telephone number for the nearest poison control center. The National Pesticide Telecommunications Network (NPTN) telephone number in Corvallis, Oregon, may also be given for non-emergency information:

1-800-424-7378

Monday - Friday

6:30 a.m. to 4:30 p.m. Pacific Time

For advice and assistance with emergency spills that involve agrichemicals, the local

emergency telephone number should be provided. The national 24-hour CHEMTREC telephone number may also be given:

1-800-424-9300

- Follow label requirements for mixing/loading setbacks from wells, intermittent streams and rivers, natural or impounded ponds and lakes, or reservoirs. (State or local regulations may be more restrictive).
- Post signs according to label directions and/or federal, state, and local laws around sites that have been treated. Follow restricted entry intervals.
- Dispose of pesticides and pesticide containers in accordance with label directions and adhere to federal, state, and local regulations.
- Read and follow label directions and maintain appropriate Material Safety Data Sheets (MSDS).
- Calibrate application equipment according to Extension and/or manufacturer recommendations before each seasonal use and with each major chemical change.
- Replace worn nozzle tips, cracked hoses, and faulty gauges.
- Maintain records of pest management for at least two years. Pesticide application records shall be in accordance with USDA Agricultural Marketing Service's Pesticide Record Keeping Program and state specific requirements. (State Standards shall describe record keeping requirements.)